

# **PARTS CATALOG**

FOR

## **ONAN ELECTRIC GENERATING PLANTS**

### **EL SERIES**

**ALTERNATING CURRENT MODELS**



904-11

Printed in U.S.A.



ENGINE/GENERATOR DIVISION  
**Studebaker**  
CORPORATION

2515 University Avenue S.E.,  
Minneapolis 14, Minnesota



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## PARTS CATALOG

1

This parts catalog applies to the \*standard EL Generating Plants as listed in the Plant Data Table.

Parts are illustrated and identified by corresponding reference numbers in the Parts List. Parts illustrations represent typical items and do not necessarily portray a particular part number.

Compare your ONAN plant nameplate MODEL and SPEC. NO. with the Plant Data Table. Select the Parts Key No. (1, 2 etc. in the last column) that applies to your plant Model and Spec. No. This Parts Key No. appears in the description of parts that differ between models. Unless otherwise mentioned in the parts description, parts are interchangeable between the various models.

PLANT DATA TABLE

PLANT DESIGNATION		TYPE	ELECTRICAL DATA				PARTS KEY NO.
MODEL	SPEC		WATTS	VOLTS	CYCLES	PHASE	
10EL-3R/ } 9EL-53R/ }	* 1A-1K	HOUSED HOUSED	10,000 9,000	115/230 115/230	60 50	1 1	1 1
10EL-4R/ } 9EL-54R/ }	* 1A-1K	HOUSED HOUSED	10,000 9,000	120/208 120/208	60 50	3 3	2 2
10EL-5R/ } 9EL-55R/ }	* 1A-1K	HOUSED HOUSED	10,000 9,000	230 230	60 50	3 3	3 3
10EL-3R } 10EL-3R8/ } 9EL-53R/ } 9EL-53R8/ }	* 8A-8K	UNHOUSED UNHOUSED UNHOUSED UNHOUSED	10,000 10,000 9,000 9,000	115/230 115/230 115/230 115/230	60 60 50 50	1 1 1 1	4 4 4 4
10EL-4R/ } 10EL-4R8/ } 9EL-54R/ } 9EL-54R8/ }	* 8A-8K	UNHOUSED UNHOUSED UNHOUSED UNHOUSED	10,000 10,000 9,000 9,000	120/208 120/208 120/208 120/208	60 60 50 50	3 3 3 3	5 5 5 5
10EL-5R/ } 10EL-5R8/ } 9EL-55R/ } 9EL-55R8/ }	* 8A-8K	UNHOUSED UNHOUSED UNHOUSED UNHOUSED	10,000 10,000 9,000 9,000	230 230 230 230	60 60 50 50	3 3 3 3	6 6 6 6

\* \* While this catalog specifically covers the standard Spec 1 (Housed), and Spec 8 Unhoused plants we have listed also optional Groups for Gas-Gasoline (Spec 12) and Mounted Fuel Tank (Spec 28). For Spec Numbers other than these use this book as a guide. Order by description and include complete Model and Spec Number of your Plant.

NOTE: Part numbers prefixed by (FM) are Ford Motor Co. part numbers and may be secured through your local Ford Agency. Ford Model Number is 8NNN-1004. For quick service on Ford Parts it is suggested that you use this source of supply.

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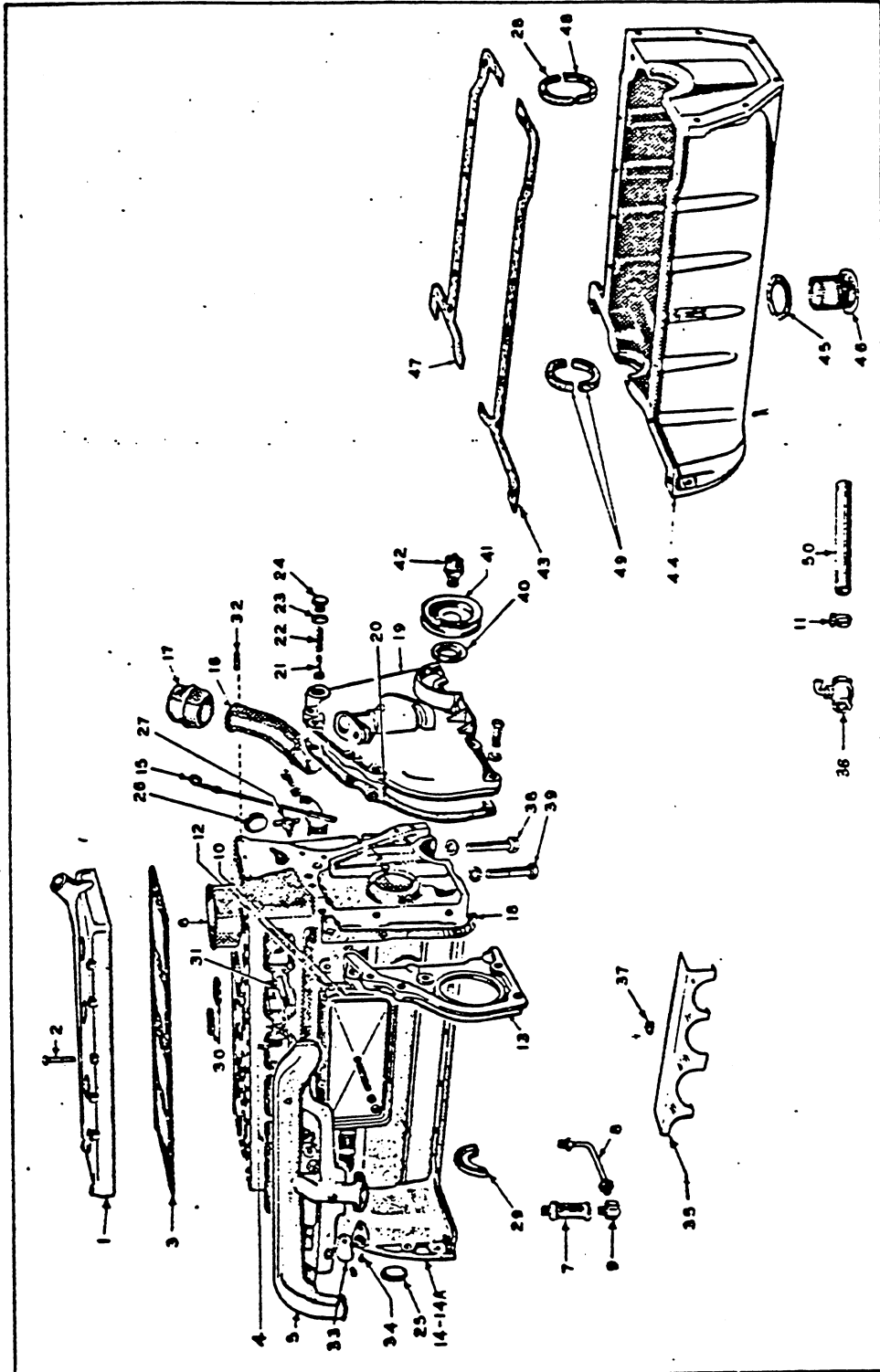


FIG. 1 - CYLINDER BLOCK GROUP - External

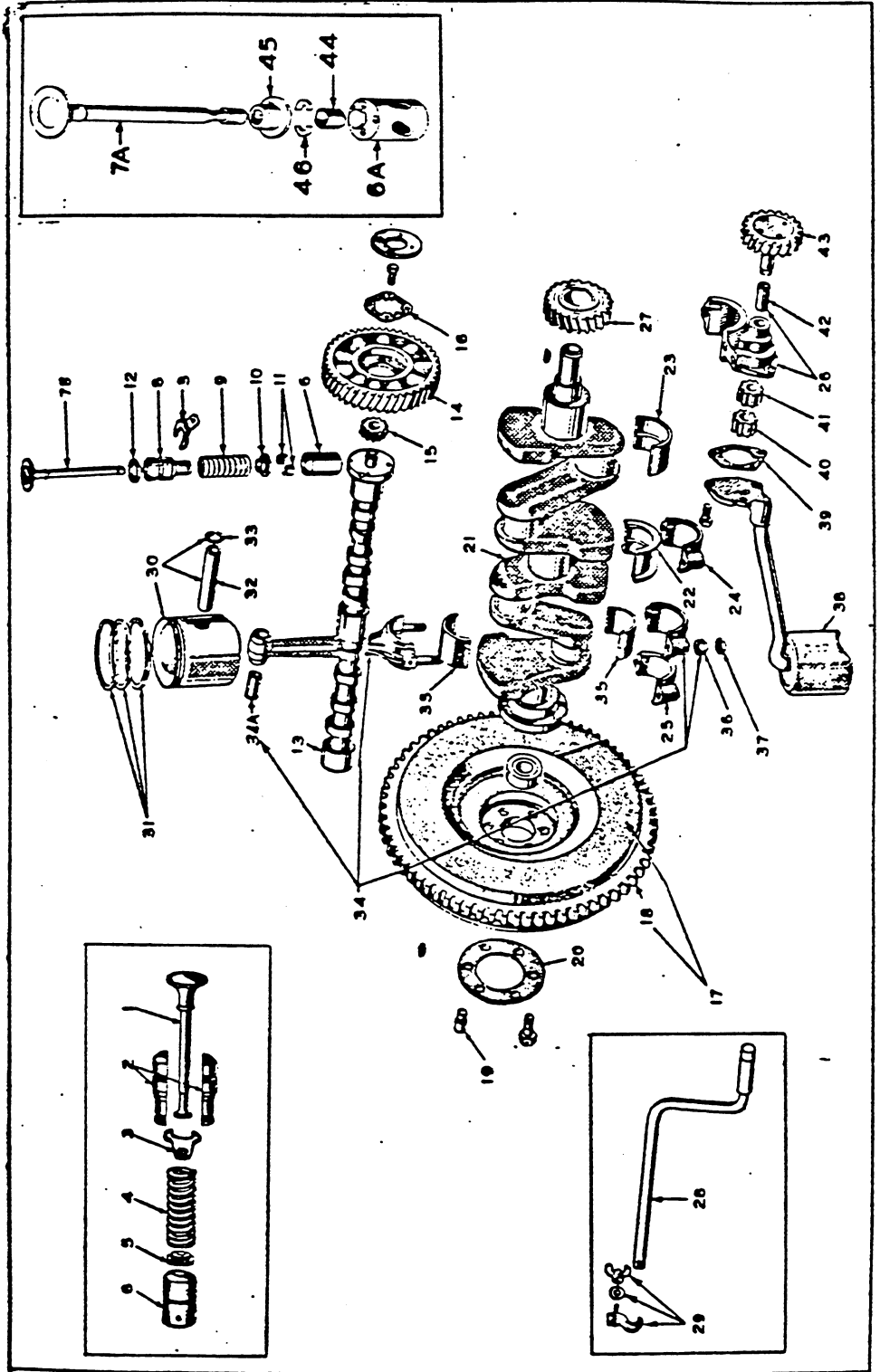


FIG. 2 - CYLINDER BLOCK GROUP - Internal

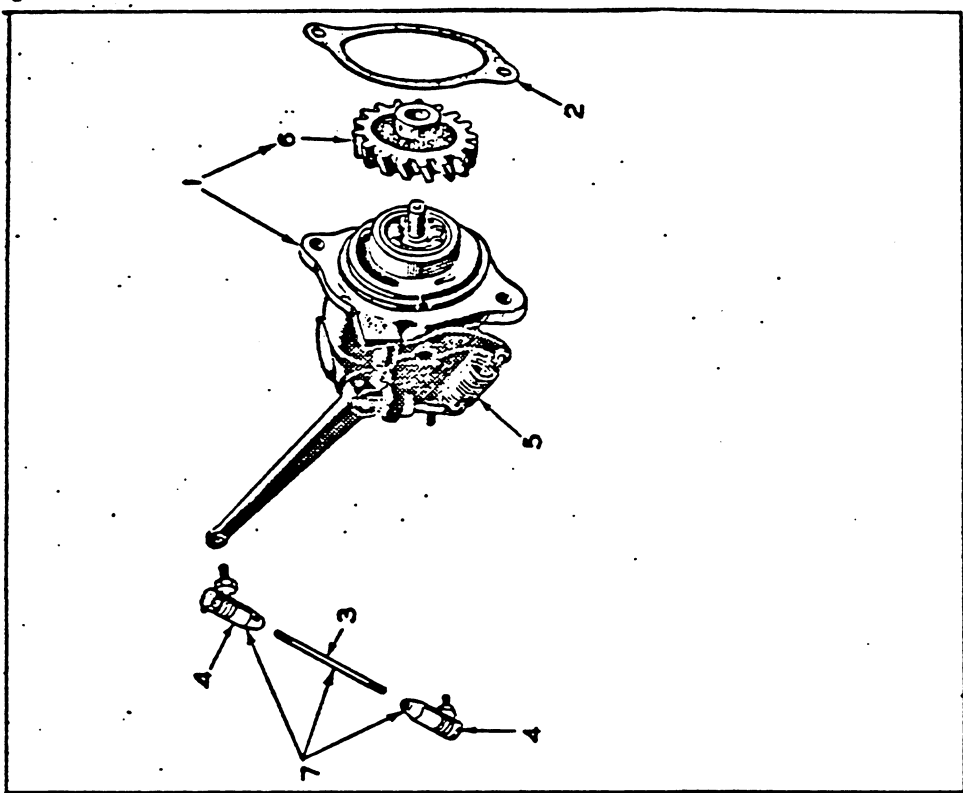


FIG. 4 - GOVERNOR GROUP

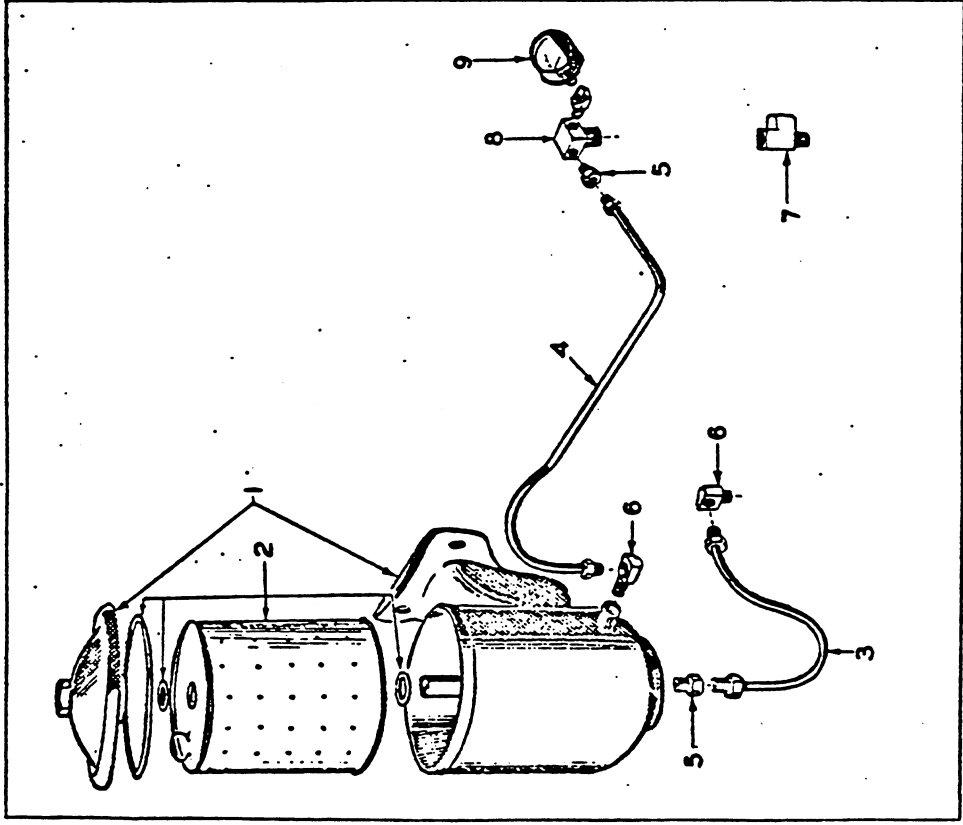


FIG. 3 - OIL FILTER GROUP

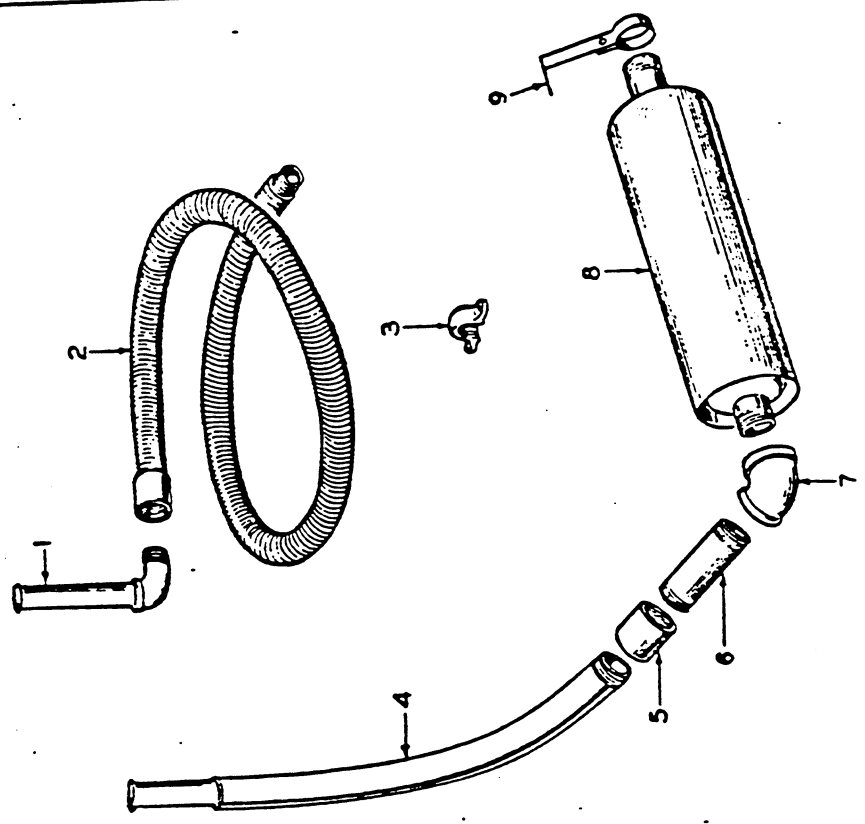


FIG. 5 - MUFFLER GROUP

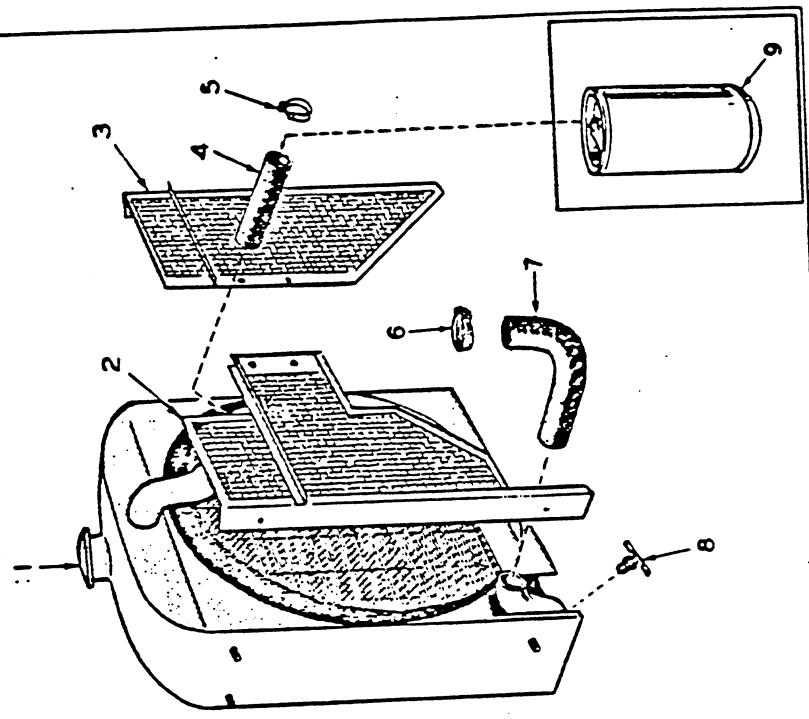


FIG. 6 - RADIATOR GROUP

JOEL A-K  
904-11

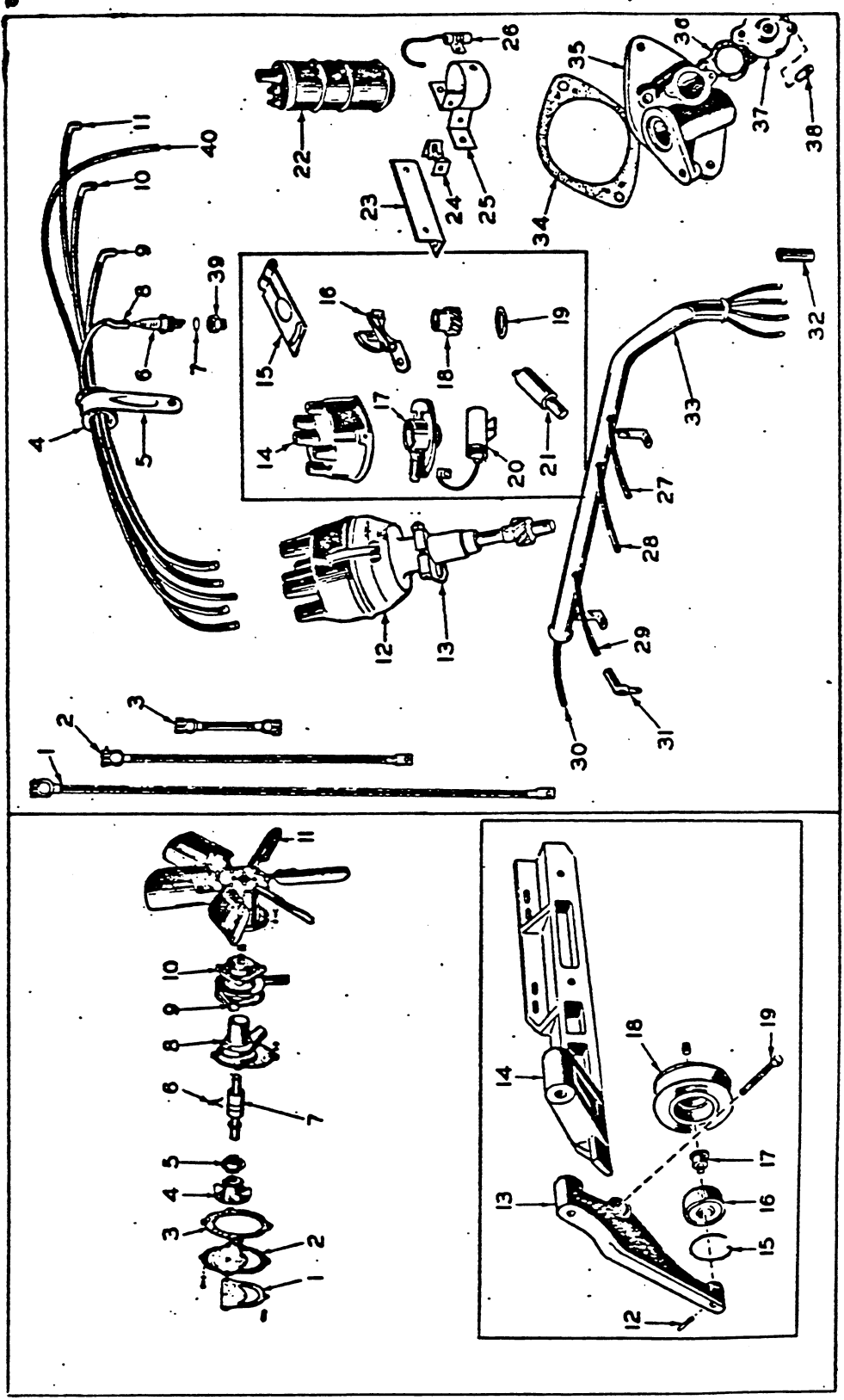


FIG. 8 - IGNITION GROUP

FIG. 7 - WATER PUMP GROUP



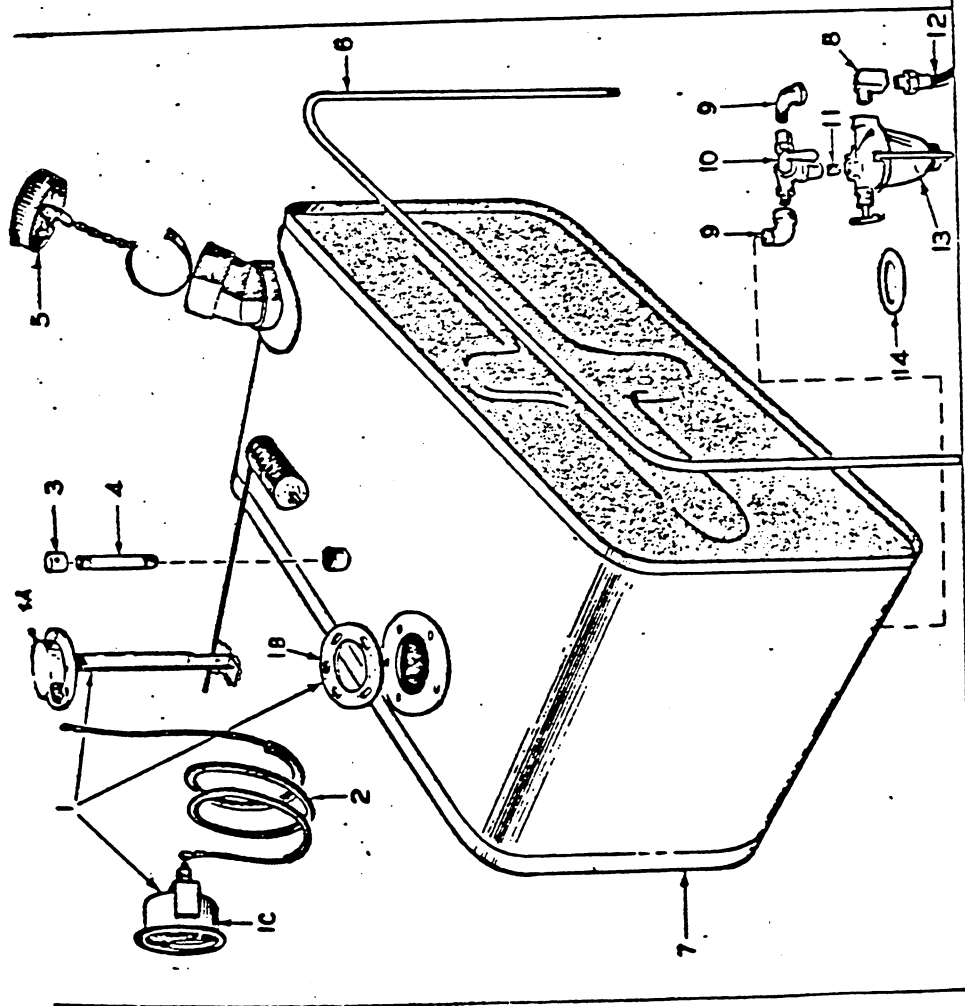


FIG. 9 - MOUNTED FUEL TANK GROUP

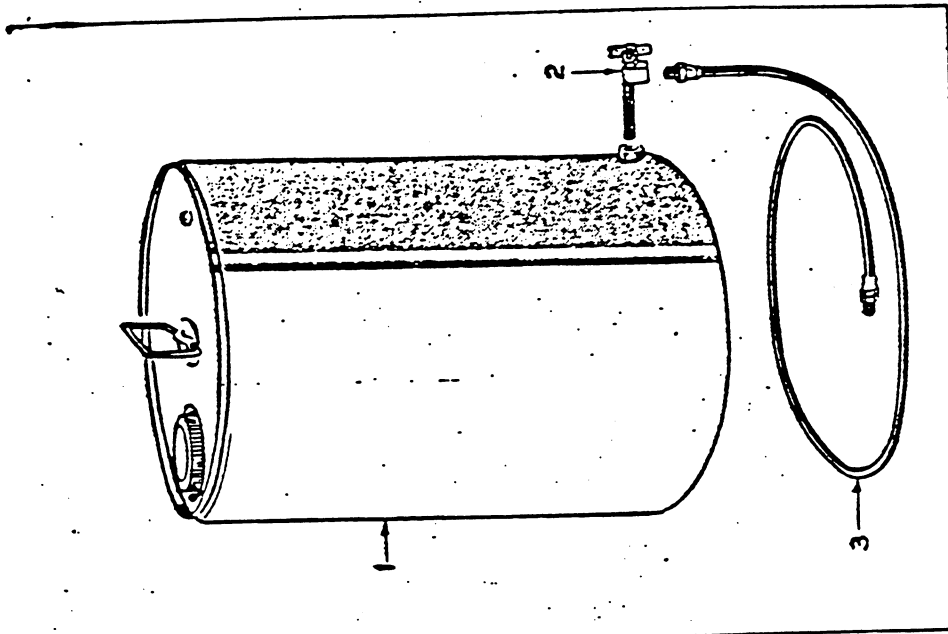


FIG. 10 - SEPARATE FUEL TANK GROUP

JOEL A-K  
904-11

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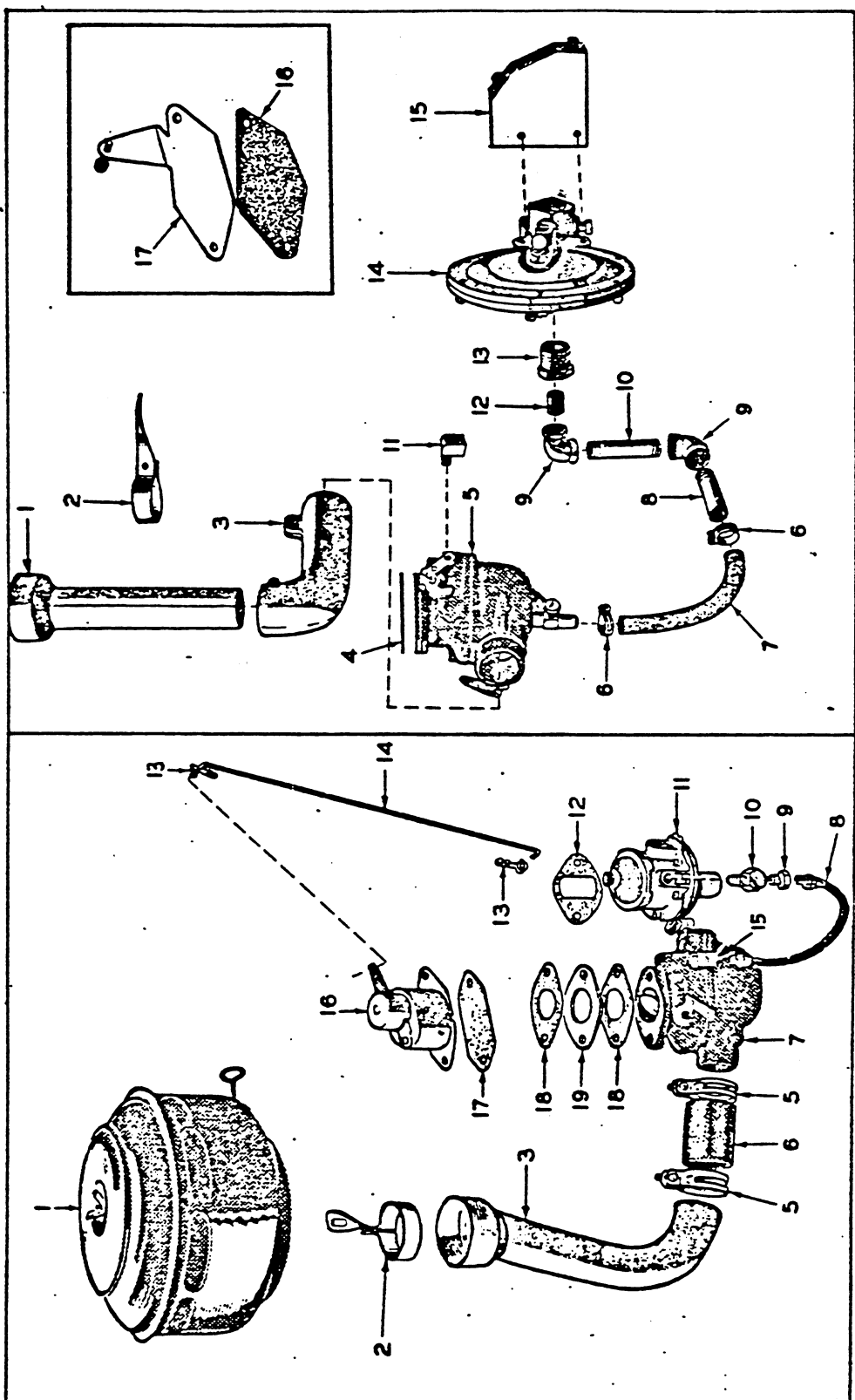
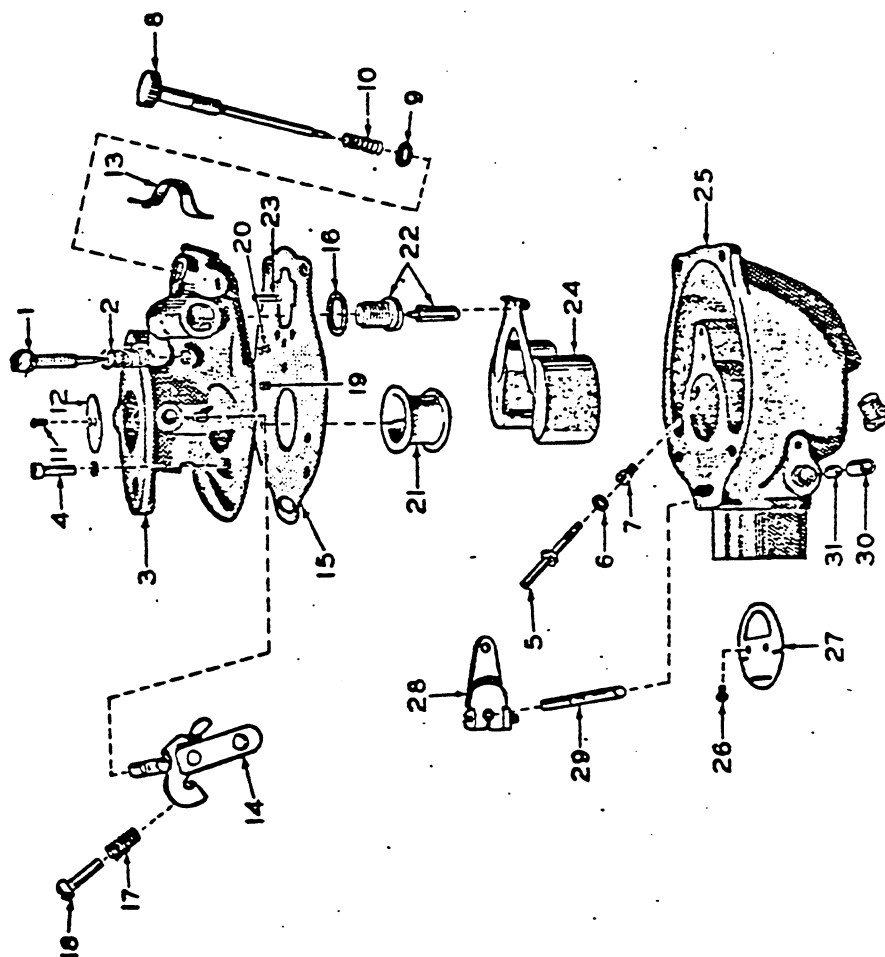


FIG. 12 - FUEL SYSTEM GROUP - Gas-Gasoline

FIG. 11 - FUEL SYSTEM GROUP - Gasoline



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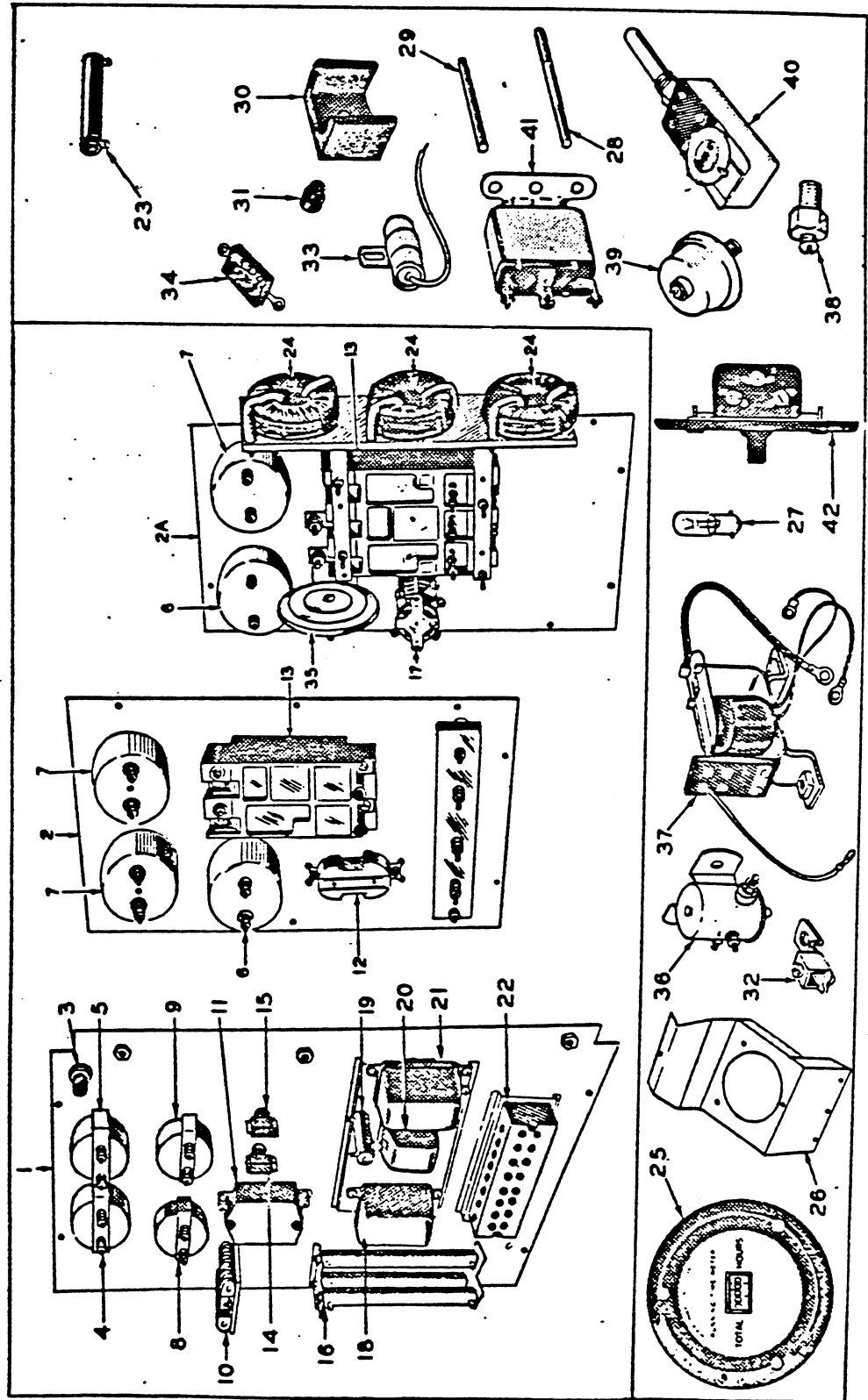


FIG. 14 - CONTROL GROUP - Housed Plant

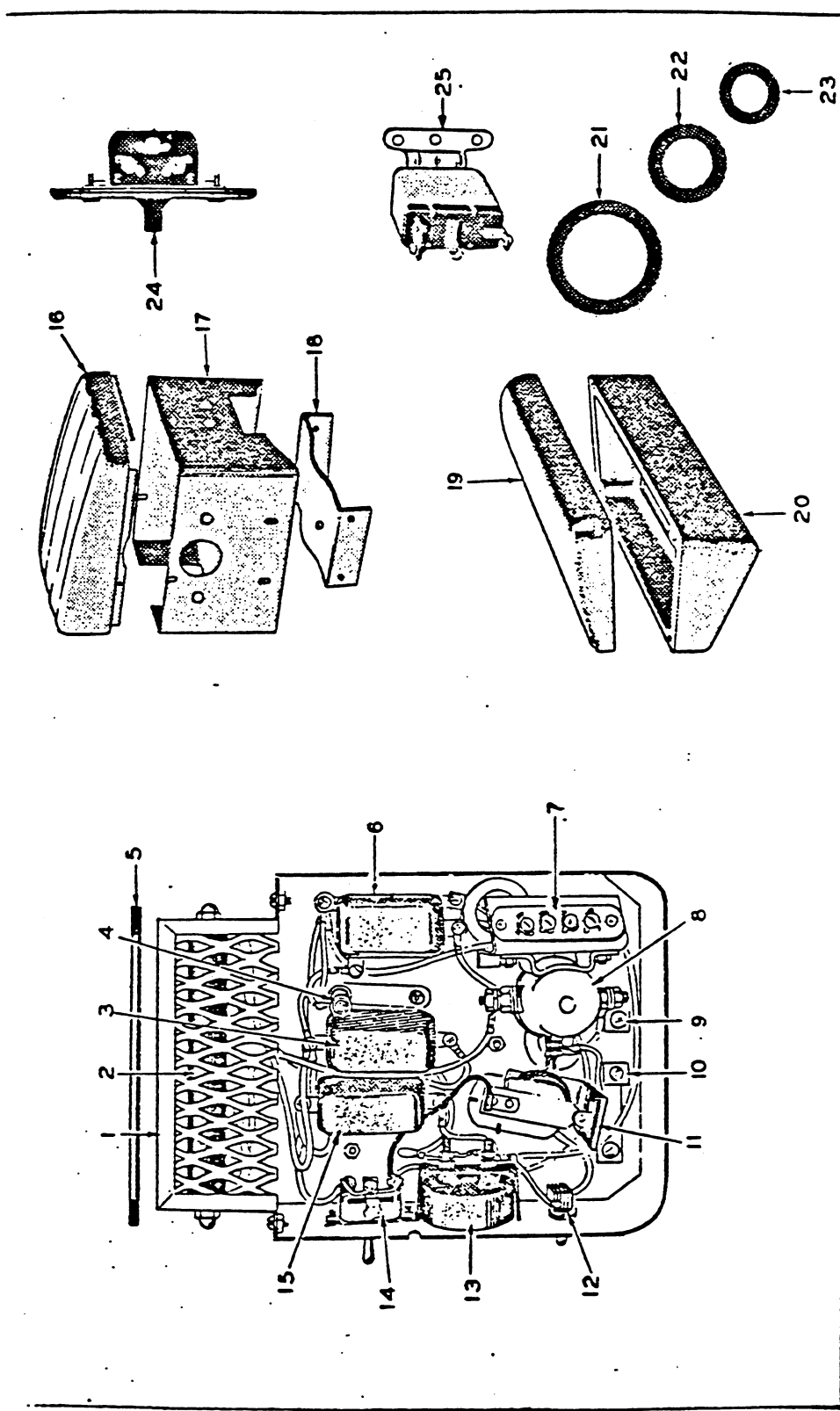


FIG. 15 - CONTROL GROUP - Unhoused Plant

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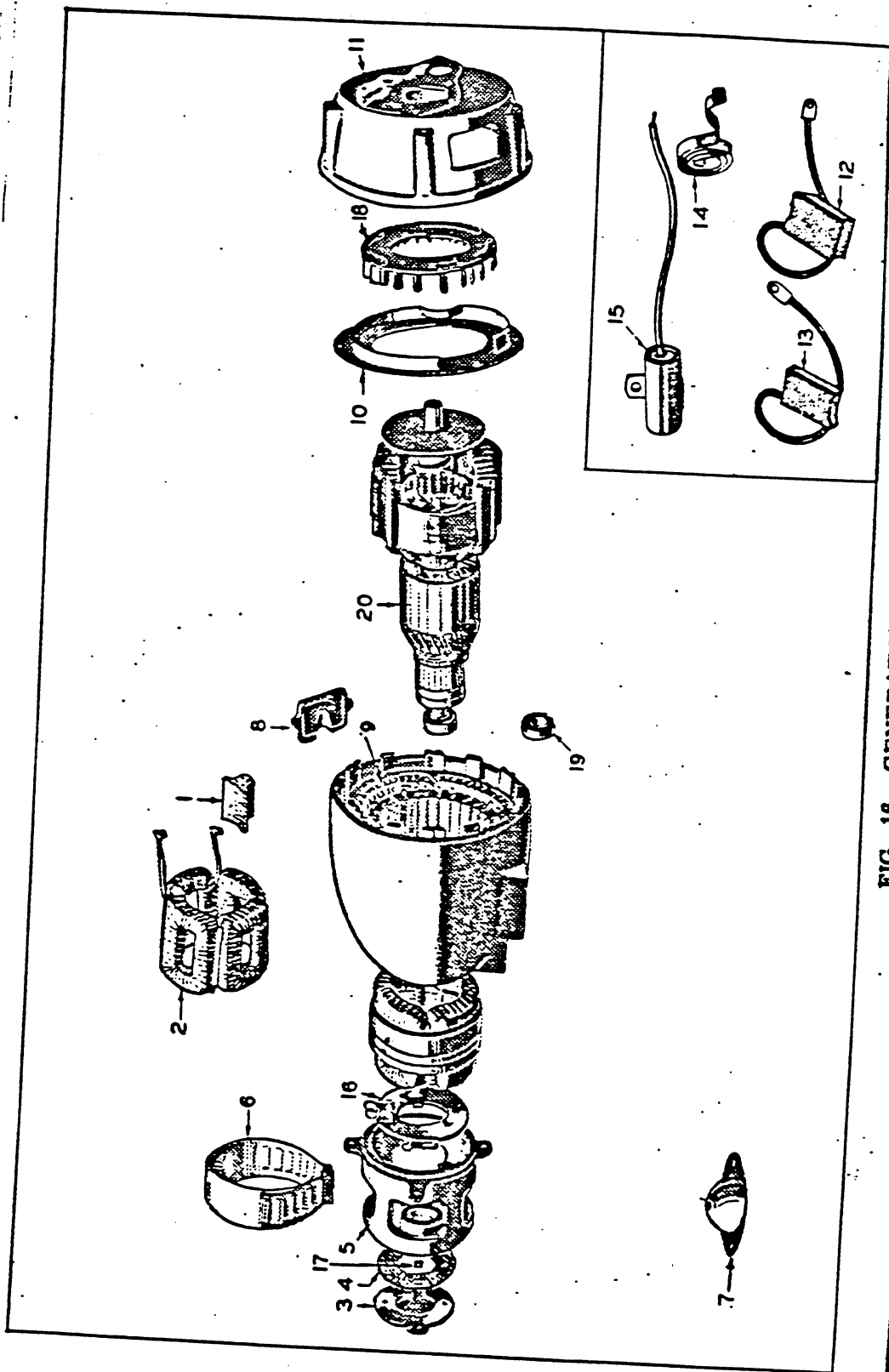


FIG. 16 - GENERATOR GROUP

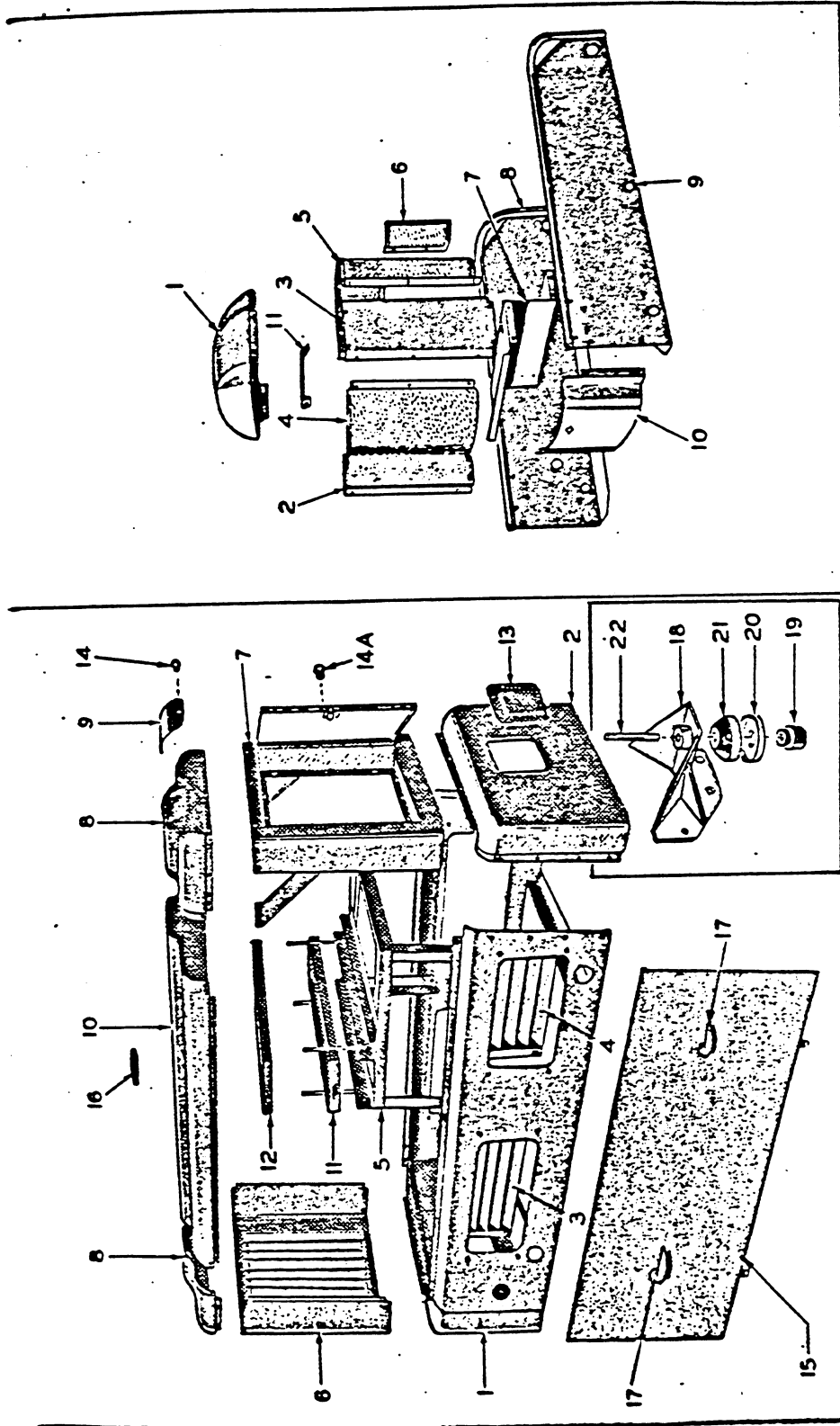


FIG. 17 - HOUSING GROUP

FIG. 18 - MOUNTING GROUP - Unhoused Plants

## PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 1 - CYLINDER BLOCK GROUP - EXTERNAL			
	100A115	1	Engine, Replacement - 4 Cylinder Ford Model 8NNN-1004 with modifications by ONAN to Manifold, Valve Cover, Cylinder Head, Head Gasket, Oil Drain Plug. General Description: - INCLUDES Distributor, Flywheel, Water Pump. EXCLUDES Carburetor, Fuel Pump, Air Cleaner, Fuel Filter, Oil Filter, Coil, Spark Plugs, Governor, Radiator, Fan, Fan Belt.
1	110B509	1	Head, Cylinder - W/provision for cut-off switch mounted vertically - Replaces # (FM)2NC-6050A.
2	(FM)8N-6055-A1-A2	18	Bolt, Cylinder Head - Replaces Stud # (FM)18-6066.
3	110B548	1	Gasket, Cylinder Head - W/provision for cut-off switch mounted vertically - Replaces # (FM)9N-6051.
4	154A313	2	Gasket, Manifold to Cylinder Block.
5	154B107	1	Manifold, Intake and Exhaust - W/Provision for Choke and Breather Connection - Replaces # (FM)2N-9425.
6	185-13	4	Sleeve, Cylinder - (FM)99A-6055.
7	123-188	1	Valve Assembly, Breather.
8	123A190	1	Tube Assembly, Breather.
9	502-42	1	Elbow, Breather Tube.
10	(FM)7HA-6520	1	Cover, Valve Chamber.
	123B282	1	Front - Replaces # (FM)2N-6520.
	503A49	1	Rear - Replaces #123B189.
11	110A803	2	Clamp, Oil Drain Hose - Replaces #603-96.
12		2	Gasket, Valve Chamber Cover - Equal to (FM)7HA-6521 (Replaces # (FM)9N-6521.).
13	(FM)8N-6017B	1	Cover, Timing Gear Side.
	(FM)9N-6017	1	Begin Serial #417757.
14	110A1021	1	Prior to Serial #417757.
	110A1020	1	Block Assembly, Cylinder - Includes Valves, Platen, Shaft, Gears.
			Prior to Serial #417757 (Direct Drive Distributor).
14A	(FM)8N-6010A	1	Begin Serial #417757 (Angle Drive Distributor).
	(FM)8N-6010B	1	Block Assembly, Cylinder - Includes Sleeves and Bearing Caps only.
			Prior to Serial #417757.
			Begin Serial #417757.



## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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## FIG. 1 - CYLINDER BLOCK GROUP - EXTERNAL (Cont.)

15	(FM)8N-6750-A1 (FM)EAF-6750B	1 1	Gauge, Oil Level. For Years 1939 through 1952 (12" Overall Length). For Years 1953 and 1954 (13.44" Overall Length).
16	123B216 (FM)8N-6763B	1 1	Tube, Oil Fill. Prior to Serial #417757. Begin Serial #417757.
17	123A20 123B386 185-5	1 1 1	Cap Assembly, Oil Fill Tube. Prior to Serial #417757. Begin Serial #417757.
18			Gasket, Timing Gear Side Cover - (FM)8N-6018 - Replaces (FM)9N-6018.
19	(FM)8N-6019B 185-6	1 1	Cover, Timing Gear Front. Begin Serial #417757. Prior to Serial #417757 - (FM)9N-6019 - Replaces (FM)2N-6019.
20	185-7 110C804	1 1	Gasket, Front Cover. Begin Serial #417757 - (FM)8N-6020C.
21	185-58	1	Prior to Serial #417757.
22	185-57	1	Plunger, Oil Pressure Relief Valve - (FM)01A-6663.
23	167-24	1	Spring, Plunger - (FM)9N-6654 - Replaces (FM)01A-6654.
24	185-59	1	Gasket, Pressure Relief Valve.
25	(FM)91A-6266	1	Nut, Pressure Relief Valve - (FM)68-6666.
26	(FM)74120S	4	Seal, Camshaft Rear Bearing.
27	504-3	1	Plug, Expansion - Cylinder Block.
28	(FM)B-6700-A3	1	Cock, Cylinder Block Drain - Replaces (FM)9N-8115.
29	185-31	1	Packing, Crankshaft Front - Upper.
30	(FM)40-6057B (FM)52-6057B (FM)88403-S (FM)88376-S8 (FM)8N-6087	4 4 4 3 1	Seal, Oil - Crankshaft Rear - Upper - (FM)91A-6335. Insert, Valve Seat. Intake. Exhaust. Stud, Manifold to Block. Stud, Water Pump to Block. Cover, Flywheel Timing Hole.

## PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
34	(FM)8N-6023	1	Pin, Timing.
35	110A347	1	Baffle, Valve Chamber.
	110A348	1	Left.
	504-11	1	Right.
36	406A45	1	Valve, Oil Drain.
37	(FM)8N-6345A	2	Spring, Baffle - Valve Chamber.
38	(FM)8N-6346A	5	Bolt, Crankshaft Bearing Cap.
39	(FM)40-6310A	1	Bolt, Crankshaft Front Bearing Cap.
40	(FM)2N-6312	1	Slinger, Crankshaft Oil.
41	185-28	1	Pulley, Crankshaft.
42	185-63	1	Ratchet, Crankshaft Starting Crank - (FM)2N-6319-A1.
43	(FM)9N-6675	1	Gasket, Oil Pan - Right - (FM)8N-6710.
44	102A52	1	Pan, Oil.
45	101A53	1	Gasket, Oil Pan Drain Cap.
46	185-67	1	Cap, Oil Drain.
47	(FM)B-6700-A3	1	Gasket, Oil Pan - Left - (FM)8N-6711.
48	185-61	1	Packing, Crankshaft - Front - Lower.
49	503A95	2	Packing, Crankshaft - Rear - (FM)8N-6701 - (Replaces (FM)91A-6347).
50	505-100	1	Hose, Oil Drain - Begin Serial #417757.
	502-133	2	Nipple, Oil Drain.
	101A149	1	Elbow, Street - 1/2" - Oil Drain Cap.
	520A367	1	Plate, Starter Hole Cover.
		2	Stud, Valve Chamber Cover.

FIG. 1 - CYLINDER BLOCK GROUP - EXTERNAL (Cont.)

FIG. 2 - CYLINDER BLOCK GROUP - INTERNAL

Valve - For 2 Piece Guide - Prior to Serial #417757.

Exhaust - (FM)9N-6505A.

Intake - (FM)11T-6505A.

Guide, Valve - 2 Piece Design - (FM)40-6510C - Pair (Replaces (FM)40-6510B) Prior to Serial #417757.

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
3	185-40	8	Retainer, Valve Guide - Prior to Serial #417757 - (FM)40-6512.
4	185-41	8	Spring, Valve - For 2 Piece Guide - Prior to Serial #417757 - (FM)2NC-6513.
5	185-43	8	Retainer, Valve Spring - For 2 Piece Guide - Prior to Serial #417757 - (FM)50-6514B.
6	(FM)8BA-6500A	8	Tappet, Valve.
6A	(FM)8N-6500	8	Prior to Spec "j" (Non-Adjustable) Replaces (FM)91A-6500-A2.
7	185-33	4	Valve, Exhaust - For 1 Piece Guide.
7A	185-36	4	Begin Serial #417757 to Spec "j" - (FM)8N-6505A.
7B	185-37	4	Begin Spec "j" (Roto Type) - (FM)8N-6505C.
8	185-38	4	Valve, Intake - For 1 Piece Guide - Begin Serial #417757 - (FM)8BA-6507A.
9	185-42	8	Guide, Valve - 1 Piece Design - (FM)8BA-6510B - (Replaces (FM)8BA-6510C) Begin Serial #417757.
10	(FM)8BA-6514	8	Spring, Valve - For 1 Piece Guide - Begin Serial #417757 - (FM)8N-6513.
11	185-44	16	Seat, Valve Spring - For 1 Piece Guide - Begin Serial #417757 to Spec "j".
12	185-47	4	Key, Valve Spring Seat - Begin Serial #417757 to Spec "j" - (FM)7HA-6518.
13	(FM)8N-6250	1	Seal, Intake Valve Guide - Begin Serial #417757 - (FM)88A-6571.
14	(FM)2NC-6250B	1	Camshaft.
15	185-26	1	Begin Serial #417757.
16	185-25	1	Prior to Serial #417757.
17	(FM)91A-6258	1	Gear, Camshaft Timing - (FM)7RA-6256A - Replaces (FM)91A-6256A.
18	(FM)8N-6375	1	Gear, Distributor Drive - Begin Serial #417757 - (FM)7RA-6255.
19	(FM)9N-6384	1	Ring, Camshaft Gear Locking.
20	(FM)B-6387A	2	Flywheel and Ring Gear - Replaces (FM)9N-6375.
21	(FM)7RA-7609	1	Gear, Flywheel Ring.
22	(FM)9N-6303A	1	Dowel, Flywheel to Crankshaft.
23	185-29	2	Retainer, Ring - Flywheel Dowel.
24	185-30	4	Crankshaft.
25	(FM)9N-6330	1	Bearing, Crankshaft Center - Upper or Lower - (FM)9N-6331A.
	(FM)9N-6325	1	Cap, Crankshaft Front or Rear - Upper or Lower - (FM)9N-6333A.
			Cap, Crankshaft Rear Bearing.

FIG. 2 - CYLINDER BLOCK GROUP - INTERNAL (Cont.)

10EL A-R  
904-11

## PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 2 - CYLINDER BLOCK GROUP - INTERNAL (Cont.)			
26	(FM)8N-6603	1	Cap, Crankshaft Front Bearing and Oil Pump Body.
	185-51	1	Begin Serial #417757.
27	(FM)48-6306A	1	Prior to Serial #417757 - (FM)9N-6603.
28	182B4	1	Gear, Crankshaft.
29	405A44	1	Crank, Manual Starting.
30	185-17	4	Clamp, Starting Crank - Complete W/1/4-20 Wing Nut.
			Piston and Pin - Aluminum (FM)8N-6108B (Replaces (FM)2N-6110A Steel Piston) NOTE: When replacing Steel Pistons used previously you must replace the complete set of 4.
31	185-20	1	Ring Set, Piston - For 4 Pistons.
			For Aluminum Pistons Only - (FM)8N-6149A.
	(FM)1NC8-6149A	1	For Steel Pistons Only.
32	185-18	4	Pin, Piston - (FM)19A-6135A.
33	(FM)78-6140	8	Ring, Piston Pin Retaining.
34	185-21	4	Rod, Connecting - Less Bearings - W/Nuts - (FM)9N-6200B.
34A	(FM)21A-62070	4	Bushing, Connecting Rod - To Piston Pin.
35	185-24	8	Bearing, Connecting Rod - Upper or Lower - (FM)9N-6211A.
36	(FM)7HA-6212	8	Nut, Connecting Rod.
37	(FM)45218-8	8	Nut, Connecting Rod Nut Lock.
38			Tube Assembly, Inlet.
	(FM)8N-6615	1	Begin Serial #417757.
	(FM)9N-6615	1	Prior to Serial #417757.
39	121A1	1	Gasket, Oil Pump.
40	185-54	1	Gear, Oil Pump Driven - Internal.
	(FM)52-6610	1	Begin Serial #417757. - (FM)8N-6610.
			Prior to Serial #417757.
41	(FM)8N-6614	1	Gear, Oil Pump Drive - Internal.
	185-56	1	Begin Serial #417757.
	185-55	1	Prior to Serial #417757 - (FM)52-6614B.
42			Bushing, Oil Pump Body - (FM)9N-6612A.
43	(FM)8N-6608	1	Gear and Shaft, Oil Pump Drive.
	(FM)9N-6608	1	Begin Serial #417757.
			Prior to Serial #417757.

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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## FIG. 2 - CYLINDER BLOCK GROUP - INTERNAL (Cont.)

44	(FM)8EQ-6550B	4	Cap, Valve Stem Roto - Begin Spec "j".
45	(FM)8RT-6514B	4	Seat, Valve Spring - For 1 Piece Guide (Roto Valve only) Begin Spec "j".
46	(FM)EAM-6518A	8	Lock, Valve Spring Seat - (Use W/Roto Valve Only) Begin Spec "j".
	(FM)8N-6546B	1	Valve Kit, Exhaust - Roto Type.

## FIG. 3 - OIL FILTER GROUP

1	122-41	1	Filter, Oil.
2	122-37	1	Cartridge, Oil Filter.
3	122A43	1	Line, Oil - Filter Outlet.
4	122C44	1	Line, Oil - Filter Inlet.
5	502-3	2	Connector, Straight - Oil Filter Line.
6	502-2	2	Elbow, Oil Filter Line.
7	502-58	1	Tee, Oil Line - Used with Cut-off Switch.
8	502A84	1	Tee, Oil Line - Pressure Element.
9	193-6	1	Gauge, Oil Pressure (Replaces #193-33) For Plants with Parts Key Nos. 4, 5 and 6.
	502-40	1	Elbow, Restricted - Pressure Element.
	505-104	1	Nipple, Pipe - 1/8 x 1-1/2" - Pressure Element.
	505-37	1	Elbow, Pipe - 1/8" x 90° - Pressure Element.
	505-98	1	Nipple, Pipe - Close - 1/8 x 3/4" - Pressure Element.

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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## FIG. 4 - GOVERNOR GROUP

1	151B32	1	Governor Assembly - Includes Gear.
2	103A53	1	Gasket, Governor Mounting.
3	520A198	1	Stud, Governor Linkage.
4	150A638	2	Joint, Ball - Governor Linkage (Replaces #150-69).
5	151A137	1	Spring, Governor.
6	151-108	1	Gear, Governor Driven.
7	150A226	1	Linkage Assembly, Governor (Includes Stud, Ball Joints and Hardware).

## FIG. 5 - MUFFLER GROUP

1	155A205	1	Elbow, Exhaust - For Plants with Parts Key Nos. 4, 5 and 6.
2	155B185	1	Tube, Exhaust - Flexible - For Plants with Parts Key Nos. 4, 5 and 6.
3	155A20	2	Clamp, Exhaust Pipe - Replaces #78021.
4	155B164	1	Elbow, Exhaust - For Plants with Parts Key Nos. 1, 2 and 3.
5	505-32	1	Coupling, Pipe - 1-1/2" - For Plants with Parts Key Nos. 1, 2 and 3.
6	505-162	1	Nipple, Pipe - 1-1/2" x 14" - For Plants with Parts Key Nos. 1, 2 and 3.
7	505-43	1	Elbow, Pipe - 1-1/2" - For Plants with Parts Key Nos. 1, 2 and 3.
8	155B77	1	Muffler, Exhaust.
9	155B74	1	Bracket, Muffler Mounting - For Plants with Parts Key Nos. 1, 2 and 3.

## FIG. 6 - RADIATOR GROUP

1	130B72	1	Radiator.
2	130C59	1	Guard, Fan - Right - For Plants with Parts Key Nos. 1, 2 and 3.
3	130C58	1	Guard, Fan - Left - For Plants with Parts Key Nos. 1, 2 and 3.
4	603A2	1	Hose, Radiator - Upper.

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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## FIG. 6 - RADIATOR GROUP (Cont.)

5	503P4	2	Clamp, Hose - Upper Hose.
6	503P4	2	Clamp, Hose - Lower Hose.
7	503A1	1	Hose, Radiator - Lower.
	503-125	1	For Plants WITHOUT Charging Generator.
8	504-3	1	For Plants WITH Charging Generator.
9	309-11	1	Valve, Radiator Drain.
			Thermostat.

## FIG. 7 - WATER PUMP &amp; IDLER PULLEY GROUP

1	185-70	1	Pump, Water - (FM)8N-8501 - Replaces (FM)2N-8501 (NOTE: Pump (FM)9N-8501 used prior to 1948 is replaced by (FM)8N-8501 HOWEVER component parts are NOT interchangeable).
2	132A53	1	Gasket, Water Pump to Cylinder Block.
			Cover, Water Pump.
	185-72	1	Begin Serial #417757 - (FM)8N-8508.
	(FM)9N-8508	1	Prior to Serial #417757.
3	132A54	1	Gasket, Water Pump Cover.
4	(FM)2N-8516	1	Impeller, Water Pump.
5	(FM)2N-8564	1	Seal, Water Pump.
6	185-77	1	Retainer, Water Pump Bearing - (FM)7HA-8576.
7	185-78	1	Bearing and Shaft - (FM)2N-8578.
8	185-71	1	Body, Water Pump - (FM)2N-8505.
9			Bell, Fan.
	511-12	1	For Plants WITHOUT Charging Generator.
	185-81	1	For Plants WITH Charging Generator - (FM)8N-8620.
10	185-80	1	Pulley, Fan - 2N-8610.
11	130C325.	1	Fan, Radiator - 6 Blade.
12	516-55	1	Pin, Idler Stud.
13	130B322	1	Arm, Idler Pulley.
14	130C318	1	Bracket and Idler Pulley - Replaces #130C317 Bracket.

## PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 7 - WATER PUMP & IDLER PULLEY GROUP (Cont.)			
15	130A323	1	Ring, Idler Pulley Lock.
16	510A35	1	Bearing, Idler Pulley.
17	130A321	1	Stud, Idler Pulley.
18	130A320	1	Pulley, Idler.
19	130A94	1	Screw, Belt Tension Adjusting.
	132K42	1	Repair Parts Kit, Water Pump.
	(FM)CPN-8591A	1	Prior to Serial #417757. Begin Serial #417757.

FIG. 8 - IGNITION GROUP (12 VOLT BATTERY IGNITION)			
1	416A71	2	Cable, Battery - 28" - For Plants with Parts Key Nos. 4, 5 and 6.
2	416-14	2	Cable, Battery - 15" - For Plants with Parts Key Nos. 1, 2 and 3.
3	416-1	1	Cable, Battery Jumper.
	416A4	1	For Plants with Parts Key Nos. 1, 2 and 3 (5" Long).
4	(FM)7RA-12297	1	For Plants with Parts Key Nos. 4, 5 and 6 (6-3/4" Long).
5	(FM)8N-12112B	1	Grommet, Wire Bracket - Not Used on all plants.
6	167A4	1	Bracket, Hi-Tension Wires - Not used on all Plants.
7	167-9	4	Plug, Spark.
8	167A1093	8	Gasket, Spark Plug and Adapter.
9	167A1070	1	Lead, Spark Plug - #1 - Not Shielded - Begin Serial #417757.
10	167A1077	1	Lead, Spark Plug - #2 - Not Shielded - Begin Serial #417757.
11	167A1111	1	Lead, Spark Plug - #3 - Not Shielded - Begin Serial #417757.
12	(FM)8N-12127	1	Lead, Spark Plug - #4 - Not Shielded - Begin Serial #417757.
	166A77	1	Distributor, Ignition - Includes Gear.
	(FM)7HA-12273	1	Begin Serial #417757.
13		1	Prior to Serial #417757. Clamp, Distributor Timing - Begin Serial #417757.



## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
14	(FM)8N-12106	1	Cap, Distributor.
15	166P235	1	Begin Serial #417757.
16	160A186	1	Prior to Serial #417757.
	(FM)7RA-12171	1	Clamp, Distributor - Prior to Serial #417757.
17	166P245	1	Point Set, Distributor.
	(FM)7RA-12200	1	Begin Serial #417757.
18	166P234	1	Prior to Serial #417757.
19	166A75	2	Rotor, Distributor.
20	166A78	1	Begin Serial #417757.
	(FM)7RA-12300B	1	Prior to Serial #417757.
21	312-10	1	Gear, Distributor - Prior to Serial #417757.
22	160A181	1	Gasket, Distributor - Prior to Serial #417757.
23	166P259	1	Condenser, Distributor.
24	166A33	1	Begin Serial #417757.
25	166B102	1	Shaft, Distributor Drive - Prior to Serial #417757.
26	166B101	1	Coll, Ignition - 12 Volt (Replaces #166B92).
27	312A58	1	Bracket, Coll Clamp Mounting.
28	167A1077	1	Spacer, Coll Mounting.
29	167A1078	1	Clamp, Coll Mounting.
30	167A1079	1	Condenser, Coll (Replaces #312A74, 312A71 or 312A15).
31	167A1080	1	Lead, Spark Plug - #1 - Not Shielded - Prior to Serial #417757.
32	314P32	4	Lead, Spark Plug - #2 - Not Shielded - Prior to Serial #417757.
33	314P6	1	Lead, Spark Plug - #3 - Not Shielded - Prior to Serial #417757.
34	167C26	1	Suppressor - "L" Shaped.
35	160A424	1	Suppressor - Straight.
	160C179	1	Conduit, Spark Plug Lead - Prior to Serial #417757.
	160B164	1	Gasket, Distributor Gearcase - Begin Approximately 7/1/43 to Serial #417757.
			Gearcase, Distributor Drive - Begin approximately 7/1/43 to Serial #417757.
			Drive Assembly, Magneto - Prior to approximately 7/1/43 (Use also Clamp #160A186) Not Illustrated.

FIG. 8 - IGNITION GROUP (12 VOLT BATTERY IGNITION) Cont.

PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 8 - IGNITION GROUP (12 VOLT BATTERY IGNITION) Cont.			
36	103A52	1	Gasket, Gearcase Cover - Prior to Serial #417757.
37	160A180	1	Cover, Gearcase - Prior to Serial #417757.
38	620A185	1	Stud, Distributor Drive Thrust - Prior to Serial #417757.
39	167A42	4	Adapter, Spark Plug.
40	167A1076	1	Lead, Distributor to Coll.
	508-1	1	Grommet, HI-Tension Cable.

FIG. 9 - MOUNTED FUEL TANK GROUP - OPTIONAL

For Plants with Parts Key Nos. 1, 2 and 3.

1	159K200	1	Tank Kit, Fuel - Contains entire group.
1A	193K1	1	Gauge Kit, Fuel - Tank and Panel Units - Includes items marked (*) plus hardware.
1B	193D15	1	*Element, Fuel Gauge - Tank Unit.
1C	193A10	1	*Gasket, Fuel Gauge Tank Element.
2	193A11	1	*Gauge, Fuel - Panel Unit.
3	336A345	1	Wire, Fuel Gauge.
4	123A250	1	Cap, Tank Breather Pipe.
5	505-133	1	Nipple, Breather Pipe.
6	159B20	1	Cap, Fuel Tank.
7	159B365	2	Rod, Fuel Tank Tie (Replaces #159B68).
8	159D70	1	Tank, Fuel.
9	502-20	1	Elbow, Fuel Line.
10	505-49	2	Elbow, Street.
11	504P4	1	Valve, Fuel Shut off.
12	502-46	1	Nipple, Close.
13	501-9	1	Line, Fuel.
14	149A12	1	Filter, Fuel.
	149A157	1	Gasket, Fuel Filter Bowl.

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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FIG. 10 - SEPARATE FUEL TANK GROUP

For Plants with Parts Key Nos. 4, 5 and 6.

1	415A10	1	Tank, Fuel - 5 Gallon.
2	504A13	1	Valve, Shut off.
3	501-9	1	Line, Fuel.

FIG. 11 - FUEL SYSTEM GROUP - GASOLINE

Cleaner, Air (NOTE: Units Prior to approximately 9/1/51 use also Bracket #140A255).  
Bracket, Air Cleaner - Replaces #140A153 and #140A154.

1	140C150	1	Cleaner, Air
2	140A255	1	Bracket, Air Cleaner
3	140C148	1	Tube, Air Cleaner.
5	503-11	2	Clamp, Air Hose.
6	503-88	1	Hose, Air Cleaner Tube.
7	142C180	1	Carburetor.
8	501-3	1	Line, Fuel - Pump to Carburetor.
9	502-3	2	Connector, Fuel Lines to Pump Elbow.
10	149A262	2	Elbow, Fuel Pump.
11	149A68	1	Pump, Fuel - Includes Pump #149-67 plus fittings. F-16
12	149A277	1	Gasket, Fuel Pump Mounting.
13	518P5	2	Clip, Choke Rod End.
14	153A108	1	Rod, Choke Control.
15	502-20	1	Elbow, Street - Carburetor.
16	153P87	1	Choke, Automatic Control - 12 Volt.
17	153A26	1	Gasket, Choke Mounting.
18	154A49	2	Gasket, Carburetor Mounting.
19	145A66	1	Flange, Carburetor Adapter.
	149K106	1	Repair Parts Kit, Fuel Pump.

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
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FIG. 12 - FUEL SYSTEM GROUP - GAS-GASOLINE (OPTIONAL)

1	148K61	1	Conversion Kit, Gasoline to Gas-Gasoline - Includes entire group (For Battery Ignition Plants Only).
2	140B56	1	Tube, Air Cleaner.
3	140A255	1	Bracket, Air Cleaner - Replaces #140B65.
4	148B47	1	Adapter Assembly, Choke - Includes Butterfly.
5	154A49	2	Gasket, Carburetor Mounting.
6	142C171	1	Carburetor Assembly - Gas, Gasoline.
7	503-32	2	Clamp, Hose.
8	503-84	1	Hose, Rubber.
9	505A10	1	Nipple, Half.
10	505-38	2	Elbow, Regulator - 90°.
11	505-71	1	Nipple - 2".
12	502-20	1	Elbow, Street - Carburetor Inlet.
13	505-99	1	Nipple, Close - Regulator.
14	505-20	1	Bushing, Reducer - Regulator.
15	148A428	1	Regulator, Gas - Atmospheric Type - Replaces 148A9.
16	148A117	1	Bracket, Regulator Mounting.
17	153-26	1	Gasket, Automatic Choke.
	153A20	1	Lock Assembly, Automatic Choke.
	505-8	1	Plug, Slotted Head - Regulator.

FIG. 13 - CARBURETOR GROUP

1	142C180	1	Carburetor - Gasoline Only.
2	142-85	1	Needle, Idle Adjusting.
3	142-76	1	Spring, Idle Adjusting Needle.
4	142-67	1	Body Assembly, Throttle - Not Sold Separately - Order New Carburetor.
5	142-90	4	Screw, Body to Bowl.
		1	Nozzle, Discharge.

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 13 - CARBURETOR GROUP (Cont.)			
6	142-70	1	Gasket, Main Nozzle.
7	142-118	1	Jet, Main.
8	142-339	1	Needle Assembly, Main Adjusting - Complete.
9	142-71	1	Gasket, Main Adjusting Needle.
10	142-336	1	Spring, Main Adjusting Needle.
11	142-334	2	Screw, Throttle Valve - #4-40 x 1/4".
12	142-80	1	Valve, Throttle.
13	142-78	1	Spring, Main Adjusting Needle Ratchet.
14	142-59	1	Shaft and Lever Assembly, Throttle.
15	142-69	1	Gasket, Body to Bowl.
16	148A17	1	Gasket, Washer - Float Valve Seat.
17	142-75	1	Spring, Throttle Stop Screw.
18	142-64	1	Screw, Throttle Stop.
19	142-92	1	Jet, Economizer.
20	142-119	1	Jet, Idle.
21	142-117	1	Venturi.
22	142-106	1	Valve Assembly, Fuel Inlet.
23	142-84	1	Shaft, Float.
24	142-83	1	Float Assembly.
25		1	Bowl Assembly - Not Sold Separately - Order New Carburetor.
26	142-334	2	Screw, Choke Valve - #4-40 x 1/4".
27	142-80	1	Valve Assembly, Choke.
28	141B162	1	Lever, Choke Shaft.
29	142A277	1	Shaft, Choke.
30	145A36	1	Bushing.
31	142-88	1	Packing, Choke Shaft.
	142-103	2	Plug, Carburetor Drain - Hex Head.
	142-335	1	Spring, Choke Valve Flapper.
	142-120	1	Pin, Throttle Stop.
	142-99	1	Washer, Main Adjusting Needle.
	142-332	1	Screw, Drill Plug Nozzle Hole - #8-32.
	142-110	1	Gasket Kit, Carburetor.

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 14 - CONTROL GROUP - HOUSED PLANTS			
For Plants with Parts Key Nos. 1, 2 and 3.			
1	301C714	1	Panel, Right Hand - Engine Control Hall.
2	301C331	1	Panel, Left Hand - Electrical Meter Hall.
2A	301C330	1	For Plants with Parts Key No. 1.
3	322-5	1	For Plants with Parts Key Nos. 2 and 3.
4	193P24	1	Light, Pilot.
5	193A22	1	Gauge, Engine Oil Pressure - Panel Element.
6	302P421	1	Gauge, Engine Water Temperature - Panel Element.
7			Voltmeter (0-300 Volts) - Replaces 302-41.
			Ammeter, DC.
8	302P419	2	For Plants with Parts Key No. 1 (0-50 Amps) - Replaces 302-7.
9	302P404	1	For Plants with Parts Key Nos. 2 and 3 (0-35 Amps.) - Replaces 302-124.
10	302A58	1	Ammeter, Charge (10-0-10 Amps.).
11	193-11	1	Gauge, Fuel - Panel Element - Also available in Kit #193K1 - See Fig. 9.
12	193A30	1	Divider, Voltage.
13	308A9	1	Switch, Start-Stop.
	323P48	1	Receptacle, Duplex Twisted - For Plants with Parts Key No. 1.
			Breaker, Circuit.
14	320-42	1	For Plants with Parts Key No. 1 (50 Amp - 2 Pole).
15	320-54	1	For Plants with Parts Key Nos. 2 and 3 (5 Amp - 3 Pole).
16	308P5	1	Switch, Toggle - Ignition - SPDT.
17	308-2	1	Switch, Toggle - Panel Light - SPST.
18	304A30	3	Resistor, Charge Circuit - 3 Ohm, 75 Watt (3/4" x 6").
19	308-22	1	Switch, Meter Selector - For Plants with Parts Key Nos. 2 and 3.
20	305A1	1	Regulator, Voltage - 2 Step - 12 Volt.
21	304P32	1	Resistor, Charge Relay - 15 Ohm, 10 Watt.
22	307B180	1	Relay, Reverse Current - 12 Volt.
23	307B4	1	Block, Terminal - 8 Place.
	332P64	1	Resistor, Running Time Meter (5,000 Ohm) For Plants with Parts Key No. 3.
	304-99	1	

## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 14 - CONTROL GROUP - HOUSED PLANTS (Cont.)			
24	302-123	3	Transformer, Current - For Plants with Parts Key Nos. 2 and 3.
25	302-212	1	Meter, Running Time - Optional.
	302-102	1	60 Cycle Plants (Replaces #302-68).
26	301C446	1	50 Cycle Plants.
27	322-4	1	Panel, Time Meter Mounting.
28		1	Lamp, Pilot Light - 12 Volt.
	332A20	2	Stud, Output Terminal - Insulated.
	332A20	3	For Plants with Parts Key No. 1.
29	332A35	3	For Plants with Parts Key Nos. 2 and 3.
30		1	Stud, Output Terminal - Grounded - For Plants with Parts Key Nos. 1 and 2.
	332B21	2	Block, Output Terminal Stud.
	332B21	3	For Plants with Parts Key No. 1.
		3	For Plants with Parts Key Nos. 2 and 3.
31		2	Bushing, Terminal Block.
	332A22	2	For Plants with Parts Key No. 1.
	332A22	3	For Plants with Parts Key Nos. 2 and 3.
32		3	Terminal, Solderless.
	332-142	3	For Plants with Parts Key Nos. 1 and 3.
	332-142	4	For Plants with Parts Key No. 2.
33		2	Condenser, Output Terminal.
	312-58	2	For Plants with Parts Key No. 1 (.1 Mfd.) - Replaces 312A15.
34	312-58	3	For Plants with Parts Key No. 2 (.1 Mfd.) - Replaces 312A15.
35	312-16	3	For Plants with Parts Key No. 3 (.01 Mfd.).
36	304A74	1	Resistor, Field Discharge - 2200 Ohm - For Plants with Parts Key Nos. 2 and 3.
37	307B40	1	Switch, Start Solenoid.
38	306A28	1	Relay, Start-Disconnect.
39	193B23	1	Gauge, Engine Water Temperature - Engine Element.
40	193B25	1	Gauge, Oil Pressure - Engine Element.
41	309A146	1	Switch, High Water Temperature - Ignition Cut off - 1/2" Pipe Thread - Replaces 309-9.
	307B81	1	Relay, Automatic Choke.

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 14 - CONTROL GROUP - HOUSED PLANTS (Cont.)			
42	308A165	1	Switch, Remote Start-Stop Control (Replaces #308-40 and 308A94)
	332A18	1	Block, Terminal - 4 Place - For Remote Connection.
	193B15	1	Element, Fuel Gauge - Tank Unit.
	334A27	1	Cable, 3 Wire - Remote Control - Order by foot.
FIG. 15 - CONTROL GROUP - UNHOUSED PLANTS			
For Plants with Parts Key Nos. 4, 5 and 6.			
1	301C657	1	Box, Resistor Mounting.
2	304A30	3	Resistor - 3 Ohm, 75 Watt (3/4" x 6").
3	305A1	1	Regulator, Voltage - 2 Step - 12 Volt.
4	304P32	1	Resistor - 15 Ohm, 10 Watt.
5	520A191	3	Stud, Resistor Mounting.
6	307B4	1	Relay, Stop.
7	332-222	1	Block, Terminal.
8	307B40	1	Switch, Start Solenoid.
9	332A170	1	Terminal, Battery Positive.
10	332A171	1	Terminal, Battery Negative.
11	306A28	1	Relay, Start-Disconnect.
12	308P5	1	Switch, Toggle - Remote - Hand Crank.
13	302A58	1	Ammeter, Charge (10-0-10 Amp.).
14	308A26	1	Switch, Start-Stop.
15	307B180	1	Relay, Reverse Current - 12 Volt.
16	301C202	1	Cover, Control Box.
17	301C683	1	Box, Control.
18	301A407	1	Bracket, Control Box Mounting.
19	301C143	1	Cover, Terminal Box.



## PARTS LIST

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REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 15 - CONTROL GROUP - UNHOUSED PLANTS (Cont.)			
20	301C840	1	Box, Terminal.
21	508-9	2	Grommet - 1" I.D.
22	508-21	3	Grommet - 1/2" I.D.
23	508-2	2	Grommet - 3/8" I.D.
24	308A165	1	Switch, Remote Start-Stop Control (Replaces #308-40 and 308A94).
25	307B81	1	Relay, Automatic Choke.

FIG. 16 - GENERATOR GROUP

NOTE: AC Generator Part Numbers shown in this group apply only to inherently regulated generators. For a plant using an automatic voltage regulator, order generator parts by part description and ONAN nameplate information using this list as a guide only. The plant model Spec Number will be different from the Spec Numbers shown in the Plant Data Table.

1	221A4	4	Shoe, Pole - Exciter Field (4-1/2" Long).
2	222A1036	1	Coil Assembly, Field - Exciter - Set of 4 Coils. For Plants with Parts Key Nos. 1, 2 and 3.
	222A1036	1	For Plants with Parts Key Nos. 4, 5 and 6.
3	222A1038	1	Spec G and H only (Use with 3" rotor stack).
4	232B55	1	Begin Spec "J" (Use with 5" rotor stack).
5	232A57	1	Cover, Bearing.
6	211C11	1	Gasket, Bearing Cover.
7	232B122	1	Bell, End.
8	402A27	2	Band, End Bell.
	232B84	1	Cushion, Generator Mounting. Plate, Generator Cover.

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
9			FIG. 16 - GENERATOR GROUP (Cont.)
			Stator, Alternator - Winding and Lamination.
			For Plants with Parts Key Nos. 1 and 4.
	220A73	1	60 Cycle Plants (Spec G and H only) 3" Stack.
	220A80	1	50 Cycle Plants (Spec G and H only) 4" Stack.
	220A10	1	60 Cycle Plants (Begin Spec "j") 5" Stack.
	220A42	1	50 Cycle Plants (Begin Spec "j") 5" Stack.
			For Plants with Parts Key Nos. 2 and 5.
	220A74	1	60 Cycle Plants (Spec G and H only) 3" Stack.
	220A81	1	50 Cycle Plants (Spec G and H only) 4" Stack.
	220A38	1	60 Cycle Plants (Begin Spec "j") 5" Stack.
	220A43	1	50 Cycle Plants (Begin Spec "j") 5" Stack.
			For Plants with Parts Key Nos. 3 and 6.
	220A75	1	60 Cycle Plants (Spec G and H only) 3" Stack.
	220B114	1	50 Cycle Plants (Spec G and H only) 4" Stack.
	220A39	1	60 Cycle Plants (Begin Spec "j") 5" Stack.
	220A44	1	50 Cycle Plants (Begin Spec "j") 5" Stack.
	75674	1	Ring, Air Baffle.
	231D22	1	Adapter, Generator to Engine (4" Length) No provision for separate Starter.
10			Brush, Commutator.
11	214A23	4	For Inherently Regulated Generator (Replaces #214A15).
12	214A17	2	For Automatic Voltage Regulated (Part of Brush Rig #212C100).
13	214A8	4	Brush, Collector Ring.
14			Spring.
	212A1004	4	Collector Ring Brush.
15	212A1011	4	Commutator Brush.
16	312A27	2	Condenser (.5 Mfd.).
			Rig Assembly, Brush - Includes Brushes, Springs and Hardware.
	212C47	1	For Plants with Parts Key Nos. 1 and 4.
	212C49	1	For Plants with Parts Key Nos. 2, 3, 5 and 6.
17			Clip, Bearing Retaining.
	232A333	1	For Bearing WITHOUT Slot.
	232A441	1	For Bearing WITH Slot.

## PARTS LIST

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REF. NO.	PART. NO.	QUANT. USED	DESCRIPTION
FIG. 16 - GENERATOR GROUP (Cont.)			
18	205C44	1	Blower, Generator.
19	510A52	1	Bearing, Ball (Replaces #510A2).
20			Rotor Assembly, Wound - Includes Drive Disc, Alternator Field, Exciter Armature and Ball Bearing.
	201A351	1	Spec G and H (60 Cycle Plants) 3" Stack.
	201A352	1	Spec G and H (50 Cycle Plants) 4" Stack.
	201A81	1	Begin Spec "J" (60 Cycle Plants) 5" Stack.
	201A168	1	Begin Spec "J" (50 Cycle Plants) 5" Stack.
Generator Design Note: The Rotor Field Stack on all EL Series is 5 inch length for both 50 or 60 cycle inherently regulated generators, EXCEPT as follows: If the Generator Data Number for the "EL" series generator, as shown on the plant nameplate, ends with a "B" (example: 10EL3C1B), then a shorter length stack was used; on 60 cycle it was 3 inch, and on 50 cycle it was 4 inch length. The shorter stack can also be identified by plant model Spec "G" or "H". For Generators manufactured prior to Spec "G" and "H" the generator parts for Spec "J" apply.			

FIG. 17 - HOUSING GROUP			
1	403D121	1	Chassis, Mounting - For Plants with Parts Key Nos. 1, 2 and 3.
2	405C237	1	Panel, Chassis Rear End (NOTE: Use also Grille #405B321) For Plants with Parts Key Nos. 1, 2 and 3.
3	405B321	3	Grille, Ventilating - For Plants with Parts Key Nos. 1, 2 and 3.
4	405B293	2	Grille, Ventilating - For Plants with Parts Key Nos. 1, 2 and 3.
5	405C236	1	Support, Battery - For Plants with Parts Key Nos. 1, 2 and 3.
6	405C234	1	Panel, Front End - For Plants with Parts Key Nos. 1, 2 and 3.
7	405D240	1	Panel, Rear End - For Plants with Parts Key Nos. 1, 2 and 3.
8	405C148	2	Casting, Top End - For Plants with Parts Key Nos. 1, 2 and 3.
9	405C211	2	Cover, Top End - For Plants with Parts Key Nos. 1, 2 and 3.
10	405C375	1	Plate, Top - For Plants with Parts Key Nos. 1, 2 and 3.

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# PARTS LIST

REF. NO.	PART NO.	QUANT. USED	DESCRIPTION
FIG. 17 - HOUSING GROUP (Cont.)			
11	416B87	1	Tray, Battery - For Plants with Parts Key Nos. 1, 2 and 3.
12	416B61	1	Frame, Battery Hold Down - For Plants with Parts Key Nos. 1, 2 and 3.
13	405A216	1	Cover, Bearing Inspection - For Plants with Parts Key Nos. 1, 2 and 3.
14	406-2	2	Knob, Top Cover - Attached with Machine Screw - For Plants with Parts Key Nos. 1, 2 and 3.
14A	406-90	1	Knob, Rear End Panel Door - Attached with Sheet Metal Screw - For Plants with Parts Key Nos. 1, 2 and 3.
15	405D916	1	Panel, Door - For Plants with Parts Key Nos. 1, 2 and 3.
	405D376	1	Right Hand (Replaces #405D386).
	159A158	1	Left Hand.
16	406A9	1	Cover, Fuel Tank Neck Hole - For Plant Less Tank - For Plants with Parts Key Nos. 1, 2 and 3.
17	403B140	4	Handle, Door - For Plants with Parts Key Nos. 1, 2 and 3.
18	402-10	1	Bracket, Engine Mounting.
19	402-12	1	Cushion, Engine Mounting - Lower.
20	402-11	1	Cup, Lower Cushion.
21	402A68	1	Cushion, Engine Mounting - Upper.
22	406-88	1	Pin, Engine Mounting.
	406A45	2	Catch, Panel Door - Use with #406-90 Knob - For Plants with Parts Key Nos. 1, 2 and 3.
			Clip, Cover Latch - Top Plate - For Plants with Parts Key Nos. 1, 2 and 3.

FIG. 18 - MOUNTING GROUP - UNHOUSED PLANTS

For Plants with Parts Key Nos. 4, 5 and 6.

1	405D443	1	Casting, Radiator Top.
2	405C458	1	Panel, Radiator Side - Left Hand.
3	405C449	1	Panel, Radiator Side - Right Hand.
4	405C450	1	Grille, Radiator Front.
5	405C459	1	Grille, Radiator Rear - Top.
6	405C460	1	Grille, Radiator Rear - Bottom.